

Appl. No. 10/642,313
Reply to Office action of December 17, 2004

Remarks

Claims 1-20 are pending in the application. Claims 8-13 and 17-20 have been withdrawn from consideration in response to a restriction requirement. Claims 1, 14, and 16 have been amended. The specification and drawing figures have been amended to correct a number of typographical errors and inconsistencies. No new matter has been added by these amendments. Reconsideration of the application in view of these amendments and the following remarks is requested. Those amendments and remarks are believed to be fully responsive to the Office Action mailed December 17, 2004 and to place the elected claims in condition for allowance. The foregoing amendments are taken in the interest of expediting prosecution, and there is no intention of surrendering any range of equivalents to which Applicants would otherwise be entitled in view of the prior art.

AMENDMENTS TO THE SPECIFICATION

A number of amendments have been made to the specification. In paragraphs [0029] and [0032] the number used to refer to the platen has been changed from "146" to "166" to make that reference consistent with other references to the platen throughout the specification. In paragraph [0044] the number used to refer to the conduits has been corrected. In paragraph [0046] the number used to refer to the platen has been corrected and a new number, 197, has been assigned to the hollow portion of the light pin to avoid duplicate numbering. In paragraph [0051] a new number, 230, has been assigned to the hole in the recess to avoid duplicate numbering and the number 214 is correctly used to refer to the torque pin. Typographical errors have been corrected in paragraphs [0032], [0048], [0051], and [0052].

OBJECTION TO THE DRAWINGS

The drawings were objected to for using the same reference numeral to refer to two different elements. FIG. 8 has been amended to assign the number 230 to one of those elements. In reviewing the application, Applicants' attorney noticed that FIG. 6 suffered from the same type of error. Accordingly, FIG. 6 has been amended to apply the reference number 197 to the hollow portion of the light pin. FIG. 2 has also been amended to assign the reference

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number 166 to the platen in that figure, consistent with the use of that reference number throughout the remainder of the specification. As indicated above, the specification has been amended to be consistent with these changes to the drawing figures. It is believed that these changes to the drawings overcome the objection. For the convenience of the Examiner, sheets showing the correction, as well as the corrected drawing sheets have been attached to this paper.

OBJECTION TO THE CLAIMS

Claim 16 was objected to. This objection is believed overcome by the amendment to claim 16 wherein claim 16 has been placed in independent form.

CLAIM REJECTIONS -- 35 USC § 112

Claims 14-16 were rejected under 35 USC § 112, first paragraph for failing to comply with the enablement requirement. Claim 14 has been amended to overcome that rejection. Claim 14 now specifies that the light transmission medium initially has one end extending above the top of the polishing pad, that end subsequently being severed to position the severed end flush with the top surface of the polishing pad prior to initiation of a polishing operation. This claim language is supported by the specification, for example in paragraphs [0044] and [0047].

Claim 16 was also rejected under 35 USC § 112, second paragraph as being indefinite. Claim 16 has been amended to place the claim in independent form and to remove any reference to the light transmission medium extending above the polishing pad. Accordingly, the claim now recites that one end of the light transmission medium is trimmed to be substantially flush with the top of the pad. This is a structural limitation, not a method limitation, and involves no contradiction.

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CLAIM REJECTIONS – 35 USC § 102

Claims 1, 3, and 4 were rejected under 35 USC § 102(e) as being anticipated by Boyd. As amended, claim 1 now recites "a light transmitting and receiving probe having a first portion and a second portion, ... , the second portion having a top positioned flush with the top surface of the platen." The Boyd reference fails to disclose or suggest an assembly for a CMP apparatus having a light transmitting and receiving probe with an end located flush with the top surface of the platen. The probe (154) in Boyd does not have an end flush with the top surface of the platen. Neither does the probe (112) shown in the prior art figure have a top surface so positioned. Accordingly, the Boyd reference fails to disclose every element of claim 1. Claims 3 and 4 depend from independent claim 1 and therefore distinguish over the cited Boyd reference for at least the same reason as discussed with respect to claim 1.

CLAIM REJECTIONS – 35 USC § 103

Claims 2 and 5-7 were rejected under 35 USC § 103 over Boyd in view of Li et al. As the Examiner notes, Boyd fails to disclose or suggest the materials used for the platen and manifold. Li et al. also fail to make any mention of the material from which those elements are constructed. The fact that Li et al. discloses a CMP apparatus and method applied to metallic layers does not mean that the Li et al. apparatus must be made of the inventive materials of the present invention. Compare the disclosure of the present invention with that of Li et al.: The present invention discloses, for example in paragraph [0006], that existing platens and manifolds are made from stainless steel. Those platens and manifolds are exposed to chemical environments in which the pH range is from 1 to 14. Li et al. discloses nothing further than is disclosed in this paragraph. The Li et al. reference therefore fails to disclose or make any suggestion concerning the material from which the CMP apparatus is constructed. Claims 2 and 5-7 cannot be obvious in view of the combination of two references that fail to disclose or suggest claimed elements. It is not obvious to select materials that are neither disclosed nor suggested.

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ART CITED BUT NOT MADE OF RECORD

The art cited but not relied upon has been considered, but is not thought to be relevant to the invention as claimed.

CONCLUSION

In view of the foregoing amendment and remarks, claims 1-7 and 14-16 of the present invention are believed to distinguish over the cited art and to be in condition for allowance. Such allowance is therefore earnestly requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the Applicants' attorneys at 480 385-5060.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

Dated: March 9, 2005By: John A. Fisher

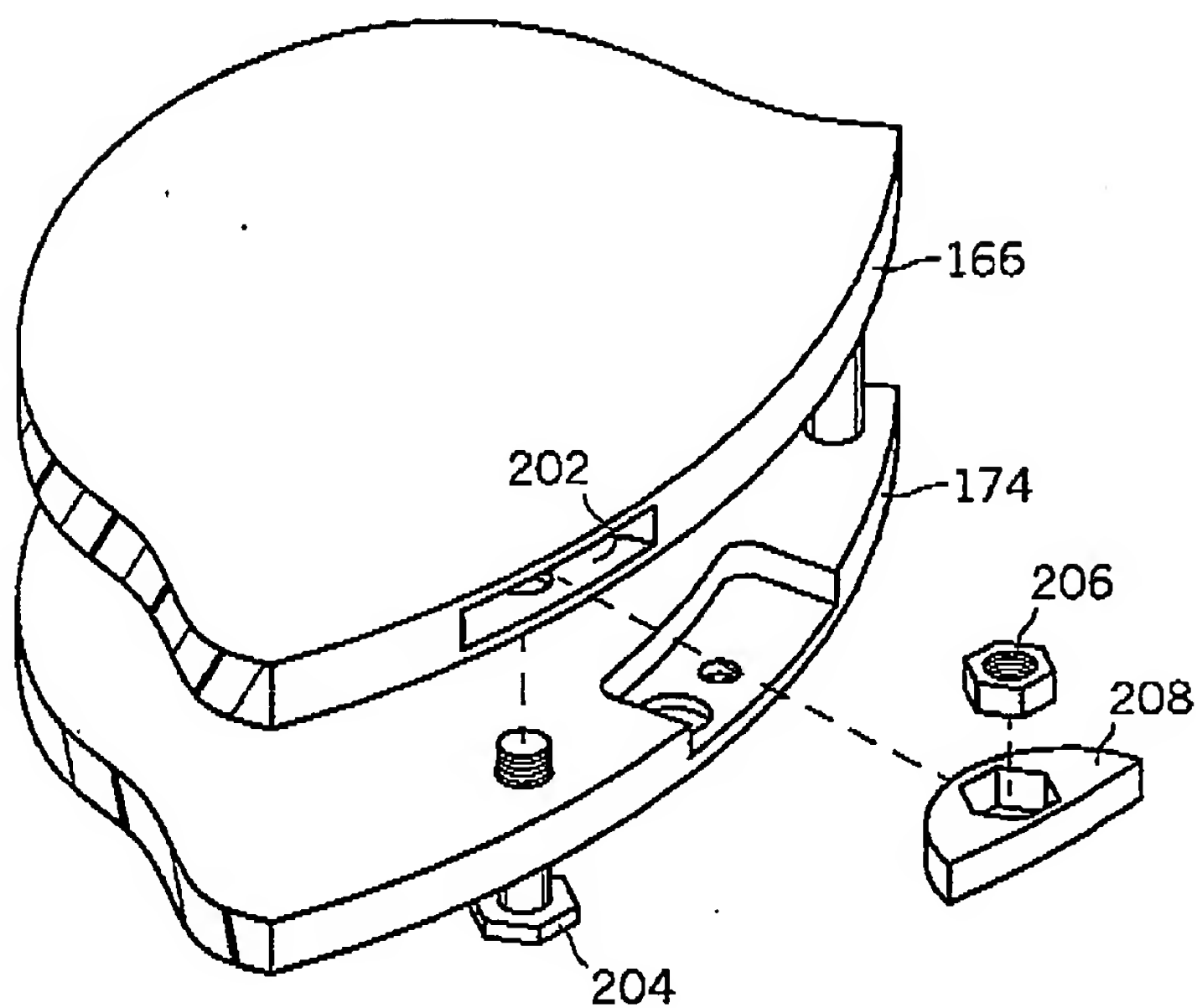
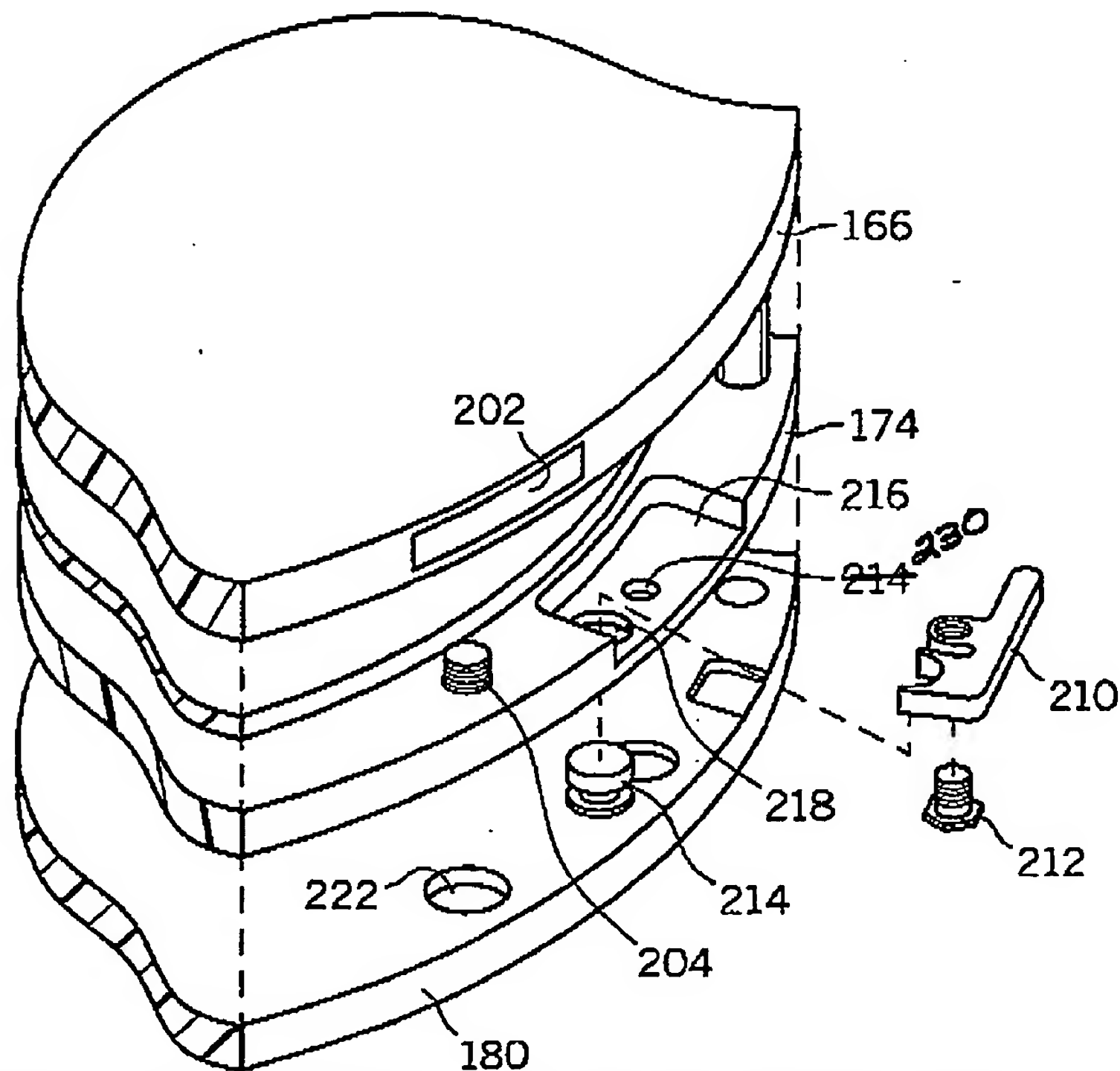
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Attachments

SCHULTZ ET AL.
004.0084

ANNOTATED MARKED-UP DRAWINGS

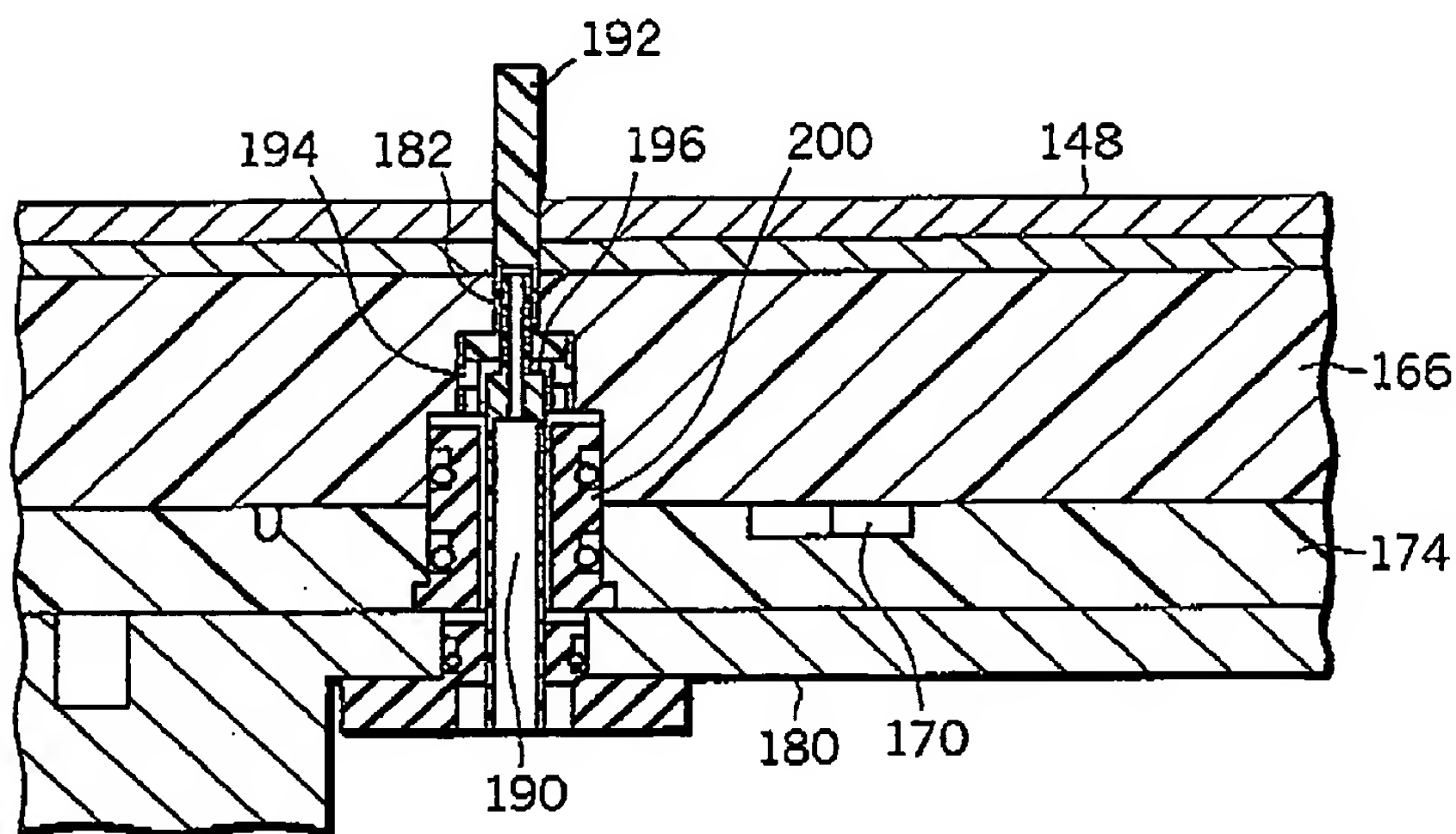
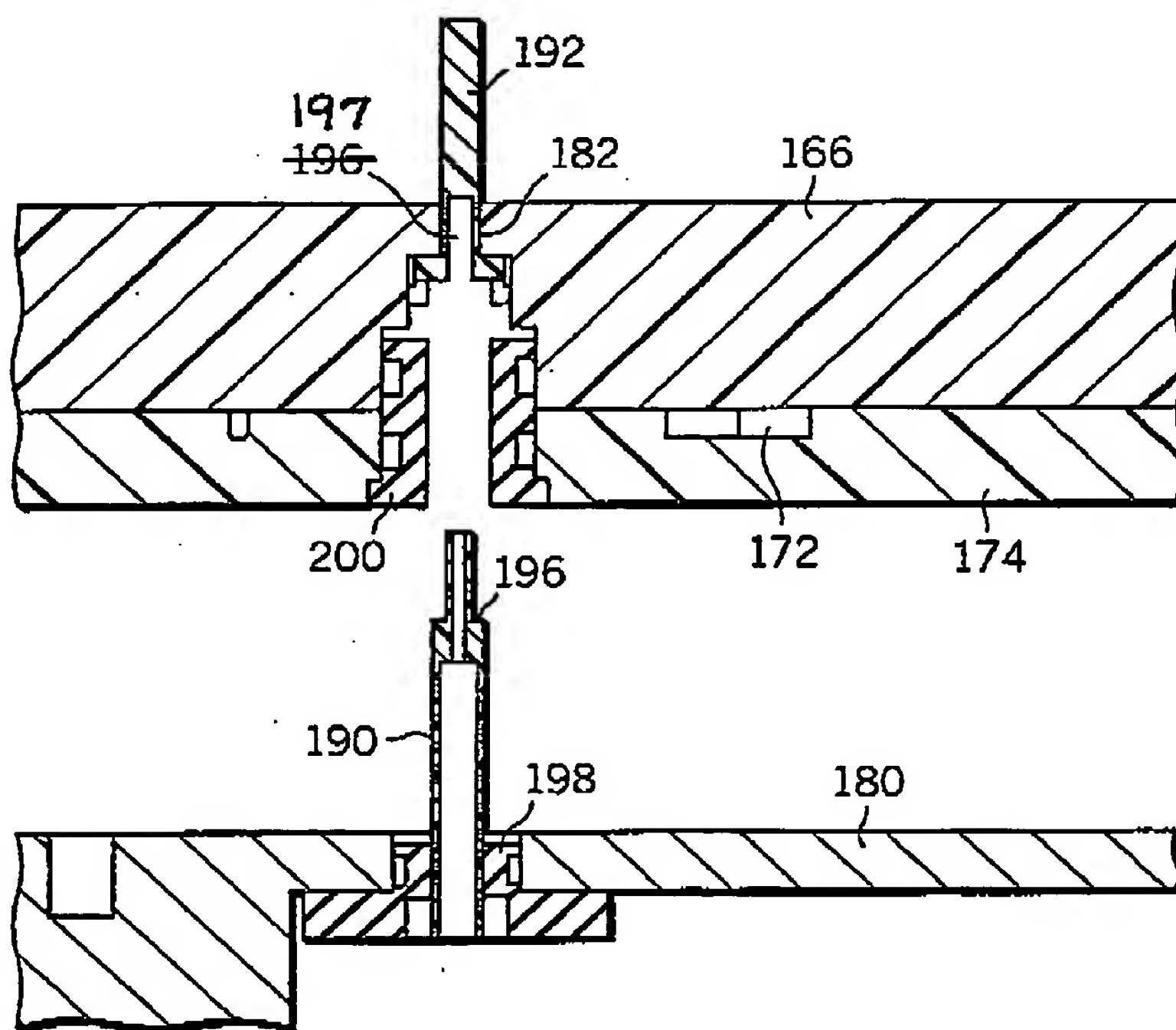
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**FIG. 7****FIG. 8**

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ANNOTATED, MARKED-UP DRAWINGS

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**FIG. 5****FIG. 6**

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ANNOTATED MARKED-UP DRAWINGS

